

## IN' NATIONAL SEARCH REPORT

International Application No  
PCT/US 03/01351A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F16K5/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 192 943 A (MOEN ALFRED M) 6 July 1965 (1965-07-06)	1-22, 24-26, 28-31
Y	column 2, line 38 -column 5, line 52; figures	23, 27
Y	US 5 730 420 A (TOW JOHN P) 24 March 1998 (1998-03-24)	23
A	column 2, line 35 -column 2, line 43; figures	17, 22
Y	DE 12 02 596 B (WHITEY RESEARCH TOOL CO) 7 October 1965 (1965-10-07)	27
A	column 2, line 25 -column 3, line 12; figures	1, 3, 4, 7-10, 17-21, 24, 28
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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

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Date of the actual completion of the international search

Date of mailing of the international search report

24 April 2003

14/05/2003

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## INTERNATIONAL SEARCH REPORT

International Application No

C, JS 03/01351

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 648 723 A (NELSON DONALD R ET AL) 14 March 1972 (1972-03-14)  column 1, line 70 -column 2, line 41; claim 1; figures	1,2, 12-14, 16,29,30
X	US 5 595 206 A (SORIA VEGA SERGIO) 21 January 1997 (1997-01-21)  column 2, line 35 -column 5, line 48; figures	17,19, 22,31, 32,34
A	US 4 685 488 A (CORBIN SUSAN E ET AL) 11 August 1987 (1987-08-11) cited in the application figures	1

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/01351

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 3192943	A	06-07-1965	NONE			
US 5730420	A	24-03-1998	NONE			
DE 1202596	B	07-10-1965	NONE			
US 3648723	A	14-03-1972	DE FR GB	2062989 A1 2073889 A5 1286615 A		24-06-1971 01-10-1971 23-08-1972
US 5595206	A	21-01-1997	NONE			
US 4685488	A	11-08-1987	AT AU CA CN DE DK EP HK IE JP NO ZA	56511 T 6797187 A 1271107 A1 87100623 A 3764813 D1 61787 A 0233060 A2 133693 A 870313 L 62266275 A 870424 A 8700565 A		15-09-1990 13-08-1987 03-07-1990 19-08-1987 18-10-1990 08-08-1987 19-08-1987 10-12-1993 07-08-1987 19-11-1987 10-08-1987 30-09-1987